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OOP-E585
OOP-E102(6)CLAIMS

W S 1. A method for producing human cell-lines comprising:

- a) immortalising a human undifferentiated or precursor cell of a given tissue type using an immortalising agent which includes or has associated therewith a control means whereby activation of the control means terminates immortalisation and allows differentiation of the undifferentiated or precursor cell,
- b) culturing said immortalised cell in order to produce a homogeneous population of human cells,
- c) activating the control means in order to terminate immortalisation and activate differentiation; and
- d) allowing differentiation of said cells so as to produce fully differentiated cells of said given tissue type.

W S 2. A method according to Claim 1 wherein said immortalising agent is an immortalising gene.

W 15 S 3. A method according to Claim 2 wherein said gene is a viral oncogene.

W S 4. A method according to Claims 1, 2 or 3 wherein said immortalising agent is a construct.

(e.g.)
Immortalizing
agent
Scotia
immortalizing
agent

w 5. A method according to Claim 4 wherein said construct is a retroviral
construct. 3 3

w 6. A method according to Claims 1 to 5 wherein said control means is
responsive to environmental conditions. 4

w 5 7. A method according to any preceding Claim wherein said
immortalising agent and control means are integrated. 5

w 8. A method according to Claim 7 wherein said integrated
immortalisation agent and control means comprise a temperature sensitive
entity. 6 6

w 10 9. A method according to Claim 8 wherein said entity is an oncogene. 7 7

w 10 10. A method according to Claims 8 or 9 wherein the immortalising agent
is SV40T antigen. 8 8

w 11. A method according to Claim 1 wherein said immortalising agent is
a chemical means. 11

15 12. A method according to Claim 1 wherein said immortalising agent is
a physical means. 12

w 13. A method according to any preceding claim wherein the process of
allowing differentiation of said cells involved exposure of said cells to a
differentiating agent. 9 9

(not for
ACCO^Y -
many
reasons)

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X 14. A method according to Claim 13 wherein said agent is Vitamin D₃. 33
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X 15. A method according to Claims 13 or 14 wherein said agent is Vitamin K, either alone or in combination with Vitamin D₃. 11

X 16. A method according to Claim 13 wherein said agent is dexamethasone. 12 12

X 17. A method according to Claim 13 wherein said agent is rabbit serum or an extract thereof. 9 17

X 18. A method according to any preceding claim which method further involves immortalisation of a human undifferentiated or precursor cell with an immortalising agent and also a safety means which enables selective disabling and/or destruction of said cell-line. 15

X 19. A method according to Claim 18 wherein said method involves transfection of said cell-line with a gene which in the presence of certain agents produces a cytotoxic effect and/or product. 16

15 X 20. A method according to Claim 19 wherein said gene is viral thymidine kinase. 15 17

X 21. A method according to Claim 19 wherein said gene is cytosine deaminse. 14 18

20 X 22. A method according to Claim 18 wherein transcription of the immortalising agent also results in transcription of the safety means. ✓

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W H S 23. Cells or cell-lines produced in accordance with the method of the invention.

Omnibus

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no e
(A/
Adopted

no C
(A/
Approved)

W H S 24. Cells or cell-lines according to Claim 23 comprising at least one homogeneous population of immortalised cells provided with means to terminate immortalisation such that a homogeneous population of differentiated cells is provided.

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X 25. Cells or cell-lines according to Claims 23 or 24 comprising at least one safety means in accordance with the invention.

Omnibus

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W H M 26. Cells or cell-lines according to Claims 22 to 25 wherein said cells or cell-lines are of human origin.

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OBVET - 175 - APPENDIX LAMINATED TO APPENDIX

W H S 27. Use of immature, undifferentiated or precursor cells to produce terminally differentiated human cell-lines that express tissue-specific functions.

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